Number 1 April 2006

SCI eTIPS for Teachers

Tips for Teaching IPS and FM&E

A Publication of Science Curriculum Inc.
200 Union Blvd., Suite G-18 Lakewood, CO 80228 888-501-0957 www.sci-ips.com

Welcome to eTIPS!

*Welcome to the first of a series of **SCI eTIPS for Teachers**! This issue is being sent to you as a PDF attachment, but our eventual goal is to send eTIPS in a dual format, so some of you will be able to see graphics while others receive a plain text message. How a message displays has to do with the software you use to receive email. If you are unable to receive graphics embedded in your email, you have a couple of options:*

1) *Contact your tech support person or internet provider to determine how your software settings should be changed so that you can receive "HTML" email.*
2) *If you find that your system can only receive text messages, let us know by emailing us at* **news@sci-ips.com** *. A blank message is fine if you state "TEXT" in the subject line.*

What is the benefit of letting us know that you can only receive text? Well, if we know that you can only receive text, we can send you the text message alone rather than a dual text/HTML message. The result is less memory space taken up in your Inbox... and none of us likes a cluttered Inbox!

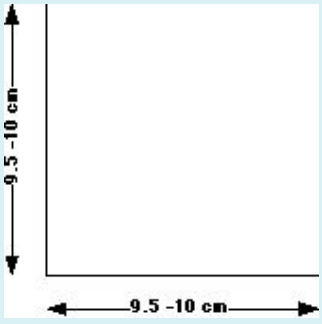
Only those people who have provided us with their email address are receiving this publication. If you know of others who would benefit from these mailings, please encourage them to register their email address by going to http://zoom.netatlantic.com/cgi-bin/lyris.pl?join=sci-support .

We hope that you find the tips contained in this publication useful. If you have any Introductory Physical Science (IPS) or Force, Motion and Energy (FM&E) tips that you would like to share with other teachers, email them to **news@sci-ips.com** *. We will review and publish the best, giving you credit for your contribution of course!*

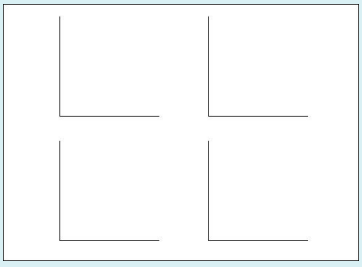
Graph Reader "Thingies"

(This tip came from one of the teachers in our first-ever FM&E Summer Workshop in 2002.)

How can students easily obtain information from graphs in the ***FM&E*** and ***IPS*** textbooks? If you are lucky enough to teach in a school where students buy their own textbooks, then drawing lines on a graph to read the coordinates of a graph point is not a problem. But in most schools, the mantra is "Don't write in the book!" So on one hand we teach students how to read a graph, but on the other we tell them not to do it!



Here is an easy solution. First, working with either a word processing or drawing program in "landscape" mode, draw two thin, perpendicular, intersecting segments similar to those you would draw to represent Cartesian axes. (Hint: A thinner line allows better estimates when reading a graph.) Segments having lengths of 9.5 to 10 cm will be sufficient to allow students to read all of the graphs in FM&E and IPS.



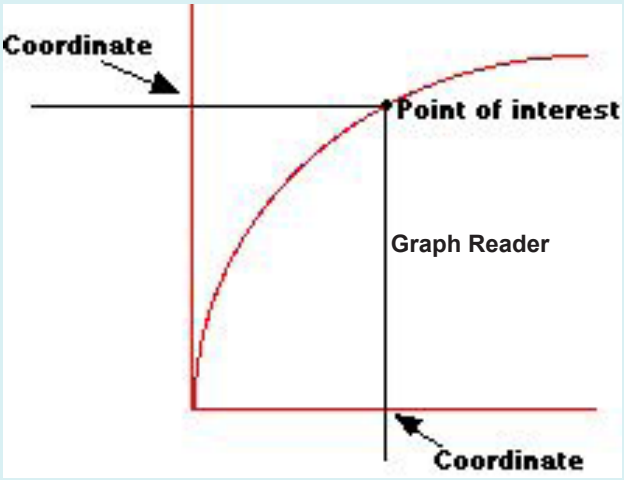
Four such sets of perpendicular segments can be fit on a single "landscape" page.

Print to a transparency. Then cut the transparency to provide four "Graph Reader Thingies" for students. (Does anyone have a more formal name for these?)

Continued on Page 2

Graph Reader "Thingies" *(continued from Page 1)*

OK, so how does it work? Starting with the normal orientation for Cartesian axes, rotate the graph reader 180°. Place it on a graph so that the vertex formed by the segments is on the graph point of interest and the segments extend parallel to the graph axes. The transparency then allows students to easily read the point's coordinates… without writing in the book!



Going to NSTA-Anaheim? Come talk to us!

If you are planning to attend the NSTA National Meeting in Anaheim April 5-9, be sure to stop by our booth! **Science Curriculum Inc. will be at Booth #1915.**

You are also invited to attend the following presentations.

Science Curriculum Inc. Exhibitor Workshop

Title: "Both Inquiry and Important Content in Middle School? IPS and FM&E!"
Presenters: Steve Melnichuk, Peter Gendel, Bob Stair
Date: Thursday, April 6
Time: 3:30 - 5:00PM
Building: Anaheim Convention Center
Room: Room 213A

Carleton Presentation

Title: "Five People I Met on the Way to Becoming a Science Education Leader: The People Who Helped Me Learn the Profession"
Presenter: Harold Pratt
Date: Friday, April 7
Time: 11:00AM - 12:00PM
Building: Anaheim Convention Center
Room: Ballroom A

Individual Presentations

Title: "Getting the Most from Multiple-Choice Questions"
Presenter: Bob Stair
Date: Friday, April 7
Time: 3:30 - 4:00PM
Building: Sheraton Park Hotel at the Anaheim Resort
Room: Park C

Title: "Improving a Course of Study and Student Success by Adding Formative Assessment"
Presenter: Harold Pratt
Date: Saturday, April 8
Time: 12:30 - 1:30PM
Building: Hyatt Regency
Room: Grand Ballroom D

Take a Workshop!

Year after year, the single, biggest tip we can give to teachers of *IPS* and *FM&E* is "Take a summer workshop!" As you know, *IPS* and *FM&E* are not the average, run-of-the-mill curricula. They are very tightly written, inquiry-based, and include experiments designed to achieve targeted results that contribute to an overall storyline. Time and again, teachers who have attended the summer *IPS* and/or *FM&E* workshops tell us that they have become better teachers because the workshops have improved their "big picture" of the storyline and the pedagogical goals of the courses. Beginning teachers tell us how much better prepared they were and how much time they saved during the school year after performing all of the experiments themselves in the workshop rather than trying to "learn the material with the kids." And veteran teachers are constantly amazed at the additional insights they gained from the workshops.

But here is the best part… SCI sets aside 5% of textbook sales amounts as a workshop credit for teachers from the purchasing school or school district. These credits are good for up to three years, so depending on your school's three-year record of purchases, you may be able to attend an approved *IPS* or *FM&E* workshop at greatly reduced cost or no cost at all to you or your school!

The following workshops are being offered at Colorado School of Mines in Golden, CO this summer...

Introductory Physical Science Workshop – July 9–21, 2006

Introductory Physical Science Workshop (Chapters 1-5 only) – July 9–14, 2006

Introductory Physical Science Workshop (Chapters 6-10 only) – July 16–21, 2006
(To register for this workshop, you must have previously taken a Chapter 1-5 workshop.)

Constructing Tests for Science Courses Workshop – July 10–14, 2006

Force, Motion, and Energy Workshop – July 16–21, 2006

In addition, we are trying to arrange a location for an IPS workshop in eastern Massachusetts. For up-to-date information on this workshop, please call us at 888-501-0957.

Don't let your credits expire! You can register for this year's summer workshops by visiting **www.sci-ips.com** .

Just a Reminder...

Additional tips are provided in the articles written by and for *IPS* and *FM&E* teachers that can be found at **www.sci-ips.com/ips/articles.html** and **www.sci-ips.com/fme/resources.html** .

In Our Next Issue...

tips on teaching students how to read a science textbook.